DOCUMENT RESUME

ED 044 171 PS 003 429

AUTHOR	Boger, Robert P.
TITLE	An Experimental Program in Classification and Attentional Training with Head Start Children.
INSTITUTION	Michigan State Univ., East Lansing. Head Start Evaluation and Research Center.
SPONS AGENCY	Office of Economic Opportunity, Washington, D.C.
PUB DATE	6 Mar 70
NOTE	8p.; Paper presented at the annual meeting of the American Educational Research Association, Minneapolis, Minnesota, March 6, 1970
EDRS PRICE	EDRS Price MF-$0.25 HC-$0.50
DESCRIPTORS	*Attention, *Cognitive Processes, Curriculum Development, Educational Programs, *Experimental Programs, Grouping (Instructional Purposes), *Preschool Children, Teacher Selection, Testing
IDENTIFIERS	Project Head Start

ABSTRACT

This report presents the research design of an experimental intervention training program designed to determine the similarities and differences in cognitive outcomes as a function of curricula based on classification and attentional training. Answers to two questicns of practical importance were sought. Given that the training program developed by Sigel and associates positively modified the cognitive skills of lower class children, could the materials be adapted for younger children without losing the character of the training? Also, could the program be carried out by Head Start teachers rather than research project personnel? Two classrooms in each of two independent programs (Detroit and Pontiac, Michigan) administered classification training and matching placebo (language training) along with attention training and its placebo (perceptual motor training). In each location, one classroom was used as a pure control. Teachers were selected from a well qualified volunteer group. A total of ten teachers and 160 children participated in this field test. A core battery of measures employed by the 1968 naticnal Head Start evaluation model was given and supplemented by measures critical to this program design. A typical pre- and pcsttest research design was used. See companion paper PS 003 428 which discusses the actual training inputs and PS 003 430 which presents the statistical analysis and results. (WY)

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ED044171

AN EXPERIMENTAL PROGRAM IN CLASSIFICATION AND ATTENTIONAL TRAINING WITH HEAD START CHILDREN*

Robert P. Boger
Michigan State University

The national Head Start evaluation model implemented in the fall of 1968 involved a series of demonstration programs designed to evaluate the potential of given intervention models with given groups of children. Eleven individual University-based E&R centers were involved in this effort. A common core battery of measures was employed to enable analyses of the national sample. In addition to this national battery, supplemental measures critical to the design of each individual intervention were also employed. In conjunction with the extensive programs of cognitive research carried on at the Merrill-Palmer Institute, the Michigan State University-Merrill-Palmer Center proposed to develop and implement a Head Start program model extending the classification and attentional training procedures resulting from earlier research efforts.

Answers to two questions of particular practical importance were needed. Given that the training program developed by Sigel and associates positively modified the cognitive skills of lower class children, could the materials be adapted for children averaging one year younger than those in the earlier experimental groups without losing the character of the training? Also, assuming development of appropriate teaching materials, could the program be effectively carried out by Head Start teachers? In all prior efforts, training was done by research assistants who had

PS003429

*Paper presented at the American Educational Research Association annual national meeting in Minneapolis, Minnesota, March 6, 1970. This research project was supported by Office of Economic Opportunity Grant No. 4118.

participated in various ways in the developing of the rationale and materials for the instructional program. As other field research has demonstrated, results obtained under these conditions often are not replicable in true field situations. Two training programs were therefore developed, based upon the conceptualization and efforts presented by Dr. Sigel. These two programs have been designated Attention and Classification training and will be discussed in detail by Dr. Earhart.

Project Design

To delineate possible effects of the training programs and to attempt to counterbalance possible positive effects of the training programs *per se* or Hawthorne effect, a matching, or placebo, training program was designed for both Attention and Classification curricula. Each matching program used the identical physical materials of its counterpart for every lesson, but avoided the conceptual inputs of the given treatment as much as possible. Moreover, the matching or placebo control program was taught by the same teacher as the intervention program to minimize the effect of teacher variation.

Because of the necessity of using the materials in some consistent manner in the placebo groups, the classification treatment classrooms utilized a language emphasis in the placebo sessions, while the attention treatment placebo involved perceptual-motor oriented lessons. Teachers were not informed as to which of the programs (treatment or placebo) was of primary treatment concern and indeed worked with each group thinking that both approaches (treatment and placebo) were equal from an experimental treatment standpoint.

Two classrooms in each of two independent Head Start programs of differing geographical location (Detroit and Pontiac, Michigan) administered the Classification training and matching placebo training; as well as the Attention training and its placebo. In each location, one classroom was used as a so called pure control. In those classrooms the teacher taught her regular curriculum with no input from the research program except for pre and post testing of the pupils.

Five classes were therefore involved in each center with a total of ten teachers (five/center) and one hundred sixty children. There were, in essence, five different experimental and control groupings within the design with thirty-two children in each category initially. Your handout provides you with a description of this design.

Site Selection and Sampling

The Pontiac and Detroit, Michigan year long Head Start Programs were selected to participate in the intervention effort. There were several reasons for this. First of all, each of these centers involved a large enough number of classes to permit appropriate sampling, and they represented different sized urban populations. Secondly, the directors of both programs in conjunction with their parent advisory councils elected to participate after carefully considering the nature and content of the program. Finally, a large number of teachers in each program indicated an interest in participating in the instructional phase of the program if they were so selected by the sampling procedure.

Detroit provided a big city urban ghetto setting while Pontiac provided a smaller urban setting. (1968 estimated Detroit population, 1,570,000;

Pontiac, 86,300.) Each of the classes involved sixteen Head Start children with a mean age upon entering of 4 years 3 months. Attrition was projected to be no more than seven percent but indeed amounted to considerable more than this (approximately 25%).

The Training Model

The training took place in small groups of four children each. Each group was instructed by the teacher individually in a separate area for approximately twenty minutes each day, while the remainder of the class carried on regular activities under the guidance of other professionals. Two of these groups of four in each class received the treatment training while the two others received the placebo training. The sequence of training of T1, T2, P1 and P2 was randomized across days.

Each of the eight experimental classrooms was equipped with an experimental unit which consisted of a special instructional table with accompanying audio recording equipment. Each of these units was identical and their nature dictated standardized usage.

The independent variables of concern were age, sex and subcultural group. Because of the limitations in sample size, the subcultural dimensions were controlled by exclusion. Each of the sample classes involved predominantly black children and a maximum 60/80 sex split was maintained.

Initial budget limitations precluded any plans for systematic teacher comparisons in the research design, although it was recognized that uncontrolled teacher differences could account for a major part of the variance in the type of design used here. The alternative was to match learning environments of the Head Start group as closely as possible in terms of

teachers and facilities. The matching procedure apparently did minimize the effects of the learning environments as subsequent analysis showed no significant difference between teachers.

Teacher Selection

Teacher selection was seen as a key aspect in the initiation of the study. The Head Start Director in each center (Pontiac and Detroit, Michigan) planned a meeting with all Head Start teachers shortly before the beginning of classes in the fall. At this meeting the project coordinators were invited to discuss the intervention study. The coordinators attempted to clearly describe the nature of the research and the research expectations of the teachers who chose to participate. A few examples of the materials and procedures to be used in each type of training were demonstrated so that the teachers would have specific information on which to base their decisions. In each instance there was extensive questioning concerning the design and nature of teacher involvement in the project. At the end of this meeting, each teacher was asked to indicate whether or not she wished to participate in the study. An honest response was encouraged by the coordinators and no pressure to participate was exerted by administrative personnel. All teachers in one center and a large majority of the teachers in the second center indicated their desire to be involved in the research study.

The selection of the five participating teachers in each center was made from this volunteer group based upon the level of teacher training and experience, the availability of necessary ancillary facilities (for

PS 003429

test and small group work) in the particular teacher's Head Start facility as well as the recommendations of administrators.

The teaching environments in the two centers were relatively equivalent. In each center, the facilities varied from one classroom to another, but the composites of classrooms in the two centers were similar.

When the selections of classrooms and teachers had been finalized, the project coordinator in each center met with each teacher individually to prepare her for the pre-testing phase of the project and to answer any additional questions she might have. The extensive and continued individual communication with teachers was considered a key factor in maintaining teacher commitments and a smoothly-functioning study.

Within Class Grouping

Grouping scores from the Classification test, the principal criterion measure of the study, were used to divide the children into equivalent groups for the training sessions. The sixteen children in each classroom were assigned to four groups by the project coordinator so that children showing a range of categorization abilities constituted both the training groups and the placebo groups. The basis of training group formulations was not disclosed to the teachers.

Measurement

A typical pre-post design was employed involving testing before the intervention program began and again following the termination of training. The tests which were administered to all subjects included the Stanford Binet Form L-M, subtests of the Wechsler Preschool and Primary Scale of Intelligence

(including the Animal House, the Geometric Design, the Block Design, the Picture Completion, and the Mazes), the Caldwell Preschool Inventory, the MSU Picture-Board Sociometric, the Gumpgookies Test, as well as tests from the Cincinnati Autonomy Test Battery (including the Test of Innovative Behavior and the Embedded Figures Test). Other tests used were the Merrill-Palmer Multiple Categorization Tests A and B, and parts of the Merrill-Palmer Attention Tests.

In addition to these child scores a comprehensive parent interview was conducted with parents of sample pupils twice during the school year (pre and post). Each classroom was also observed on four separate occasions during the school year by a team of observers using the Observation of Substantive Curriculum Input (OSCI) and Post Observation Teacher Rating forms. The classroom observation measures were of particular importance in the national evaluation design as they provided critical criterion data across many varied programs.

Analyses

The data were submitted to a series of ANCOVA analyses. Major treatment differences were shown to exist with a chance probability of less than .001. Dr. Melcer will discuss and interpret these results in more detail following Dr. Earhart's discussion of the actual training inputs.

AN EXPERIMENTAL PROGRAM IN CLASSIFICATION AND ATTENTIONAL TRAINING WITH HEAD START CHILDREN

Robert P. Boger
Michigan State University

Research and Sampling Design

	Center I				Center II			
Classification training	T_1	Exp 8 / P.C. 8	T_3	Exp 8 / P.C. 8	T_6	Exp 8 / P.C. 8	T_8	Exp 8 / P.C. 8
Attentional training	T_2	Exp 8 / P.C. 8	T_4	Exp 8 / P.C. 8	T_7	Exp 8 / P.C. 8	T_9	Exp 8 / P.C. 8
	T_5	Control 16			T_{10}	Control 16		

T_{1-10} - Teachers
Exp - Experimental
P.C. - Placebo Control
Number- Sample Size

Experimental or Control Category	Sample Size
Pure Control	32
Classification training experimental	32
Classification training placebo control	32
Attention training experimental	32
Attention training placebo control	32
	160